

### Data Sources

#### Annual Survey of Manufactures

The U.S. Bureau of the Census conducts this survey of a sample of manufacturing establishments each year. This is the most comprehensive source of information about U.S. manufacturing shipments, cost of materials, value added, wages, employment, and capital expenditures. The most recent published data available at time of publication was from 1995. These data are available for detailed (four-digit SIC) industries, but little or no regional detail is usually available. However, ERS has obtained special tabulations of metro and nonmetro totals for years 1989 through 1994. Nonmetro manufacturing statistics are obtained from these special tabulations.

#### Farm and Farm-Related Employment

The enhanced County Business Patterns data are combined with farm employment data from the Bureau of Economic Analysis to estimate farm and farm-related employment. Farm and farm-related employment includes jobs not only in farm production, but also in its closely related industries—agricultural services, forestry, and fishing; agricultural inputs; and processing and marketing of agricultural goods—as well as industries peripherally related to farming—wholesale and retail trade of agricultural products and indirect agribusiness. Farm and farm-related industries are identified as industries having 50 percent or more of their national workforce employed in providing goods and services necessary to satisfy the final demand for agricultural products. An exception to this criterion is indirect agribusiness, in which percentages range between 32 and 50 percent.

#### Indexes of Industrial Production

The Federal Reserve Board estimates a monthly index of industrial production for manufacturing industries. The production index measures real output and is expressed as a percentage of real output in the base year, currently 1992. Indexes are constructed from a variety of source data, such as the quinquennial Censuses of Manufactures and Mineral Industries and the Annual Survey of Manufactures, prepared by the Bureau of the Census. On a monthly basis, the individual indexes of industrial production are constructed from two main types of source data: (1) output measured in physical units and (2) data on inputs to the production process, from which output is inferred. Data on physical products, such as tons of steel or barrels of oil, are obtained from private trade associations as well as from government agencies, including those listed above; data of this type are used to estimate monthly indexes where possible and appropriate. When suitable data on physical products are unavailable, estimates of output are based on either production-worker hours or electric power use by industry. Data on hours worked by production workers are collected in the monthly establishment survey conducted by the Bureau of Labor Statistics. The factors used to convert inputs into estimates of production are based on historical relationships between the inputs and the comprehensive data used to benchmark the indexes; these factors also may be influenced by technological or cyclical developments.

#### National Earnings and Employment Data

Analyses of earnings by value-added workers is based on data from the Current Population Survey, also conducted by the U.S. Bureau of the Census. This is a survey of households that provides detailed information on labor force, employment, unemployment, and demographic characteristics of the metro and nonmetro populations. Estimates are based on interviews of a national sample of about 47,000 households that are representative of the U.S. civilian noninstitutional population 16 years of age and older.

#### Nonmetro Employment and Establishments by Industry

Employees and establishments by county are based on 1989-94 County Business Patterns data released by the U.S. Bureau of the Census. The employment data released by the Census Bureau includes many suppressed values to protect confidentiality of indi-

vidual firms. We used an enhanced version of County Business Patterns data that includes imputed numbers for suppressed employment values estimated by Claritas, Inc.

### **The Rural Manufacturing Survey**

ERS, in cooperation with Washington State University, conducted a nationwide survey of rural manufacturing businesses in 1996 to evaluate problems that affect their competitiveness. The Rural Manufacturing Survey provides extensive information on 2,844 nonmetro establishments and 1,065 metro establishments with 10 or more employees representing all manufacturing industries. The questions covered technology use, labor skills and training, locational barriers to competitiveness, and sources of financing. This report uses the Rural Manufacturing Survey data to evaluate the extent of local materials purchasing and capital investment decisions by value-added manufacturers.